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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,238	10/21/2004	Ana Chudzinski-Tavassi	5433-0101PUS1	5260

2292 7590 03/09/2009
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EXAMINER	
ALLEN, MARIANNE P	

ART UNIT	PAPER NUMBER
1647	

NOTIFICATION DATE	DELIVERY MODE
03/09/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/501,238	CHUDZINSKI-TAVASSI ET AL.	
	Examiner	Art Unit	
	Marianne P. Allen	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2008 and 16 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-34* is/are pending in the application.

4a) Of the above claim(s) *24,26 and 27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25 and 28-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *24-34* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-23 have been cancelled. Claims 24-34 have been newly introduced.

Applicant's arguments filed 2/28/08 and 12/16/08 have been fully considered but they are not persuasive.

Election/Restrictions

New claims 24, 26, and 27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/9/07. These new claims correspond to withdrawn groups.

Specification

The disclosure is objected to because of the following informalities: The specification does not contain sequence identifiers for all of the sequences disclosed therein. Applicant's 2/28/2008 response refers to the response submitted 1/31/2005. A CRF was submitted on this date but was not accompanied by any amendment inserting the sequence identifiers into the specification. Further review of the file reveals a preliminary amendment submitted 7/12/2004 which inserts sequence identifiers on some of the pages. However, no sequence identifiers appear to have been provided for the sequences disclosed on pages 18 and 25.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25 and 27-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Claims 25 and 27-34 are not originally filed claims. Basis for these claims is stated to be in original claim 14 and pages 5-7, 8, 10, 16, and 41. This is not agreed with.

Claim 25 is directed to a method of preventing prothrombotic disorders. Claim 28 is directed to a method for reducing fibrinogen from the blood thereby preventing acute vascular thrombosis in a patient. Claim 31 is directed to a method for preventing a prothrombotic state in a patient. Claim 33 is directed to a method for treating prothombotic disorders. Claim 34 is directed to a method for reducing the amount of fibrinogen in the blood of a patient.

First of all, neither the term nor concept of preventing or prevention is found anywhere within the original claims or specification. As such, methods involving prevention (claims 25, 28, and 31-32) are not disclosed nor contemplated. Claim 28 is directed to preventing acute vascular thrombosis in a patient. The specification at page 16 uses the term "refrain" and this is not synonymous with prevention. It does not appear to be an art understood term and its metes and bounds cannot be determined. Applicant points to pages 8 and 10 for basis of claim 31. These pages do not discuss prevention.

Secondly, independent claims 25 and 33 recite administering a prothrombin activator comprising **at least one amino acid sequence selected from the group consisting of SEQ ID**

NOS: 1, 2, 3, 4, and 5. None of the pages pointed to sets forth this concept. Original claim 14 recited administering the protein of claim 13. Claim 13 was directed to using the complete protein having all of the sequences in addition to functional limitations. (See for example, original claim 9.) These methods are not disclosed nor contemplated.

Claim 29 is directed to a particular dosage. Page 34 is pointed to for basis. This is not agreed with. This page discloses administering Lopap to rats in this amount. There is no generic disclosure of this dosage with respect to all proteins embraced by claim 28 and all patients. This specific example cannot serve as basis for a more generic claim.

Claim 32 is directed to a patient having disseminated intravascular coagulopathy leading to a consumption coagulopathy. Basis is pointed to on pages 5-6. This is not agreed with. These pages are background information concerning the hemorrhagic syndrome caused by contact with the *Lonomia oblique* caterpillar. It cannot be considered contemplation of a method for prevention as set forth in claims 31-32.

Claims 28, 31, and 34 recite "comprising the amino acid sequences set forth in SEQ ID NOs: 1, 2, 3, 4, and 5." While the specification discloses a particular protein containing all of these sequences, the specification does not disclose nor contemplate all prothrombin activators having these subfragments, particularly in any order or arrangement.

Review of the sequence listing and the specification at page 15 reveals the following:

SEQ ID NO: 1 is a 46 amino acid protein corresponding to the N-terminus of the Lopap protein.

SEQ ID NO: 2 is an 11 amino acid internal fragment I of the Lopap protein.

SEQ ID NO: 3 is a 16 amino acid internal fragment II of the Lopap protein.

SEQ ID NO: 4 is a 7 amino acid internal fragment III of the Lopap protein.

SEQ ID NO: 5 is an 18 amino acid internal fragment IV of the Lopap protein.

These sequences are disclosed as being about 15 % of the sequence of the whole 69 kD protein. The structure of the 69kD protein is not provided by the specification. Note that the claims do not require that the SEQ ID NOS. recited be present in the activator in any particular order. The claims do not require the entirety of the protein. As such, claims 28-32 and 34 constitute new matter.

With respect to claim 31, there does not appear to be any basis for "administration removes, in a controlled way, fibrinogen from the blood of said patient preventing clot formation."

The originally filed claims and specification do not support the invention as is now claimed.

Claims 25 and 28-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Review of the sequence listing and the specification at page 15 reveals the following:

SEQ ID NO: 1 is a 46 amino acid protein corresponding to the N-terminus of the Lopap protein.

SEQ ID NO: 2 is an 11 amino acid internal fragment I of the Lopap protein.

SEQ ID NO: 3 is a 16 amino acid internal fragment II of the Lopap protein.

SEQ ID NO: 4 is a 7 amino acid internal fragment III of the Lopap protein.

SEQ ID NO: 5 is an 18 amino acid internal fragment IV of the Lopap protein.

There is no evidence of record nor reason to believe that any of these protein fragments individually or collectively have any biological activity, particularly that required by the claims. These sequences are disclosed as being about 15 % of the sequence of the whole 69 kD protein. The structure of the 69kD protein is not provided by the specification. Their size alone would lead one of ordinary skill in the art to doubt that they possessed any biological activity. While the whole protein was tested for biological activity, no fragments or variants were tested.

It is further noted that no example in the specification appears to demonstrate prevention of blood clot formation or prevention of thrombotic disorders (particularly wherein the patient has disseminated intravascular coagulopathy leading to a consumption coagulopathy). The examples show that intravenous administration to rats of the whole, purified Lopap protein resulted in thrombus (clot) formation followed by severe organ damage due to hemorrhage. See at least pages 34-38. There is no example or guidance in the specification leading one of ordinary skill in the art to administer any or all of the proteins as recited in the claims that would have been expected to provide the results recited in the claims. It is unclear how this treatment would be beneficial to patients.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 31-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 is confusing in reciting "administration removes, in a controlled way, fibrinogen from the blood of said patient preventing clot formation." It is not known what would meet the limitation of "in a controlled way."

Claim 32 is also confusing in reciting "wherein the patient has disseminated intravascular coagulopathy leading to a consumption coagulopathy." It is unclear what the physiological status of the patient must be before, during, or after treatment.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne P. Allen whose telephone number is 571-272-0712. The examiner can normally be reached on Monday-Friday, 5:30 am - 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath N. Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marianne P. Allen/
Primary Examiner, Art Unit 1647

mpa